

REMARKS

Claims 1-16 are presently pending in the application. Claims 1, 8 and 13 have been amended in this response. No new matter has been introduced by the amendments. Support for the amendments may be found in paragraphs [004, 027] of the present application. Entry and consideration of this Response are respectfully requested.

Claims 1-4, 6-11 and 13-18 were rejected under 35 U.S.C. §102(e) as being anticipated by *Sugiya* (U.S. Pat. No. 5,664,131). Applicant respectfully traverses this rejection.

Specifically, *Sugiya* fails to disclose that (1) the frequency of the at least one filling light source lies within a transmitted wavelength band, (2) the control units utilize different (i.e., slow) speeds, and (3) a tilt compensation mechanism is utilized (returning the power of the at least one filling light source slowly in the direction of the original state synchronously). Instead, *Sugiya* discloses an optical light amplifier using at least one control mechanism to control a pump laser diode of the optical amplifier so that the intensity of the output signal light is constant and independent of intensity fluctuations of the input signal light. The present application recites that intensity fluctuations in the data transmission path are compensated quickly by a filling light source, which is used in addition to the pump laser diodes of the optical amplifiers. The filling light source pumps the transmission fiber and changes the spectral tilt of the (WDM) signal due to the Raman effect, and does not serve as a pump source for the Erbium doped amplification fiber of the optical amplifier. In other words, the present configuration provides power adjustment and change of tilt.

As an example of the aforementioned features, the wavelength of the filling light source is selected in a wavelength band between 1465nm to 1565 nm (i.e., slightly beyond or within the transmission band, see paragraph [0027]). Preferably, the wavelength of the filling laser is selected within the wavelength band (e.g., C-band or L-band) in the intervals between 1530nm to 1620nm.

In contrast, *Sugiya*, the wavelength of the laser source used to pump the Erbium doped amplification fibers is clearly outside and separate of the wavelength band (980nm - see FIG. 11). Furthermore, *Sugiya* is completely silent regarding the speed of operating control units (156, 142). In fact, there is apparently no connection whatsoever between the laser source and any of the control units, as the laser source 16 is connected to the photo diode 146. Although it

is conceivable that the laser diode is operatively connected to control unit 156 and to A/D converted 152, it is not understood how this arrangement (see col. 14) could accomplish the features recited in the present claims.

In light of the above, Applicant submits that the rejection under 35 U.S.C. §102 is improper and should be withdrawn. As such, independent claims 1 and 8 are now believed to be distinguishable over *Sugiya*. Likewise, dependent claims 2-7 and 9-18 are also believed to be distinguishable over *Sugiya* based on their respective dependencies on claims 1 and 8.

The Applicant respectfully requests withdrawal of the claim rejections and allowance of the application. If there are any additional fees that are due in connection with this application as a whole, the Commissioner is authorized to deduct those fees from Deposit Account No. 02-1818. If such a deduction is made, please indicate Attorney Docket No. 0112740-278 on the account statement.

Respectfully submitted,

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BY



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